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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/517,591	12/13/2004	Hideki Osaka	520.44478X00	1819

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EXAMINER	
CLEARY, THOMAS J	

ART UNIT	PAPER NUMBER
2111	

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08/20/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/517,591	OSAKA, HIDEKI	
	Examiner	Art Unit	
	Thomas J. Cleary	2111	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *08 June 2007*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *19-22* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *19-22* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 20 and 22 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

3. Claim 20 recites the limitation "the first semiconductor circuit" in Lines 1-2. There is insufficient antecedent basis for this limitation in the claim.

4. Dependent claims inherit the indefiniteness of their parent claims and are rejected under the same reasoning.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and

the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

6. Claims 19-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Japanese Patent Number JP 2001-27987 to Osaka et al. as translated by US Patent Number 6,654,270 to Osaka et al. ("Osaka") which claims priority to said Japanese Patent and is therefore an accurate translation, and US Patent Number 7,126,437 to Simon et al. ("Simon-437").

7. In reference to Claim 19, Osaka discloses a bus system adapted to transfer data between a plurality of semiconductor devices, comprising: a first wiring extending in a first direction (See Figure 1 Number 1-1) from a first semiconductor device (See Figure 1 Number 10-1); n-coupling wirings forming directional couplers extending in sequence away from said first semiconductor device in said first direction, each of said directional couplers being parallel to said first wiring (See Figure 1 Numbers 1-2 and 1-3); and n semiconductor devices, different from the first semiconductor device, each respectively connected to a corresponding one of said directional couplers (See Figure 1 Numbers 10-2 and 10-3), wherein each of the directional couplers has a predetermined coupling length and a predetermined wiring interval of spacing from the first wiring, wherein the coupling lengths of the directional couplers decrease as the respective distance of the directional couplers from the first semiconductor device increases (See Figure 1 Numbers C2 and C3). Osaka does not disclose that the wiring intervals of spacing of the directional couplers from the first wiring decrease as the respective distances of the

directional couplers from the first semiconductor device increase. Simon discloses directional couplers in which the wiring interval decreases as the distance from the first device increases (See Figure 5 and Column 3 Lines 17-22).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to construct the device of Osaka with the reduced wiring intervals of Simon, resulting in the invention of Claim 19, in order to increase the strength of the bus coupling of the later devices so that each device receives the same amount of energy, thereby improving bandwidth and reducing costs and compensating for differences in coupling intensity (See Column 1 Line 54 – Column 2 Line 35 of Simon).

8. In reference to Claim 20, Osaka and Simon disclose the limitations as applied to Claim 19 above. Osaka further discloses that the first semiconductor device is a memory controller (See Figure 1 Number 10-1).

9. In reference to Claim 21, Osaka and Simon disclose the limitations as applied to Claim 19 above. Osaka further discloses that the n semiconductor devices are DRAMS (See Column 15 Lines 11-12).

10. In reference to Claim 22, Osaka and Simon disclose the limitations as applied to Claim 20 above. Osaka further discloses that the n semiconductor devices are DRAMS (See Column 15 Lines 11-12).

11. Claim 19 is rejected under 35 U.S.C. 103(a) as being unpatentable over Simon-437 and US Patent Number 6,625,682 to Simon et al. ("Simon-682").

12. In reference to Claim 19, Simon-437 discloses a bus system adapted to transfer data between a plurality of semiconductor devices, comprising: a first wiring (See Figure 1 Number 10) extending in a first direction from a first semiconductor device (See Figure 1 Number 30); n-coupling wirings forming directional couplers extending in sequence away from said first semiconductor device in said first direction, each of said directional couplers being parallel to said first wiring (See Figure 1 Numbers 12, 14, and 16); and n semiconductor devices, different from the first semiconductor device, each respectively connected to a corresponding one of said directional couplers (See Figure 1 Numbers 24, 26, and 28), wherein each of the directional couplers has a predetermined coupling length and a predetermined wiring interval of spacing from the first wiring (See Figure 1 Numbers 12, 14, and 16), wherein the wiring intervals of spacing of the directional couplers from the first wiring decrease as the respective distances of the directional couplers from the first semiconductor device increase (See Figure 5 and Column 3 Lines 17-22). Simon-437 does not disclose that the coupling lengths of the directional couplers decrease as the respective distance of the directional couplers from the first semiconductor device increases. Simon-682 discloses using shorter electromagnetic couplers (See Column 6 Lines 14-18).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to construct the device of Simon-437 with the shorter couplers of

Simon-682, resulting in the invention of Claim 19, in order to reduce space and system costs (See Column 6 Lines 14-18 of Simon-682).

Response to Arguments

13. Applicant's arguments with respect to Claims 19-22 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

14. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thomas J. Cleary whose telephone number is 571-272-3624. The examiner can normally be reached on Monday-Thursday (7-3), Alt. Fridays (7-2).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mark Rinehart can be reached on 571-272-3632. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

TJC

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